

## 5.4 ADVANTAGES & DISADVANTAGES OF TIDAL POWER:

### 5.4.1 ADVANTAGES OF TIDAL POWER:

The following are the advantages of tidal power:

1. About two-third of earth's surface is covered by water, there is scope to generate tidal energy on large scale.
2. Techniques to predict the rise and fall of tides as they follow cyclic fashion and prediction of energy availability is well established.
3. The energy density of tidal energy is relatively higher than other renewable energy sources.
4. Tidal energy is a clean source of energy and does not require much land or other resources as in harnessing energy from other sources.
5. It is an inexhaustible source of energy.
6. It is an environment friendly energy and does not produce greenhouse effects.
7. Efficiency of tidal power generation is far greater when compared to coal, solar, or wind energy. Its efficiency is around 80%.
8. Despite the fact that capital investment of construction of tidal power is high, running and maintenance costs are relatively low.
9. The life of tidal energy power plant is very long.

### 5.4.2 DISADVANTAGES OF TIDAL POWER:

The following are the disadvantages of tidal power:

1. Capital investment for construction of tidal power plant is high.
2. Only a very few ideal locations for construction of plant are available and they too are localized to coastal regions.
3. Unpredictable intensity of sea waves can cause damage to power generating units.
4. Aquatic life is influenced adversely and can disrupt the migration of fish.
5. The energy generated is not much as high and low tides occur only twice a day and continuous energy production is not possible.
6. The actual generation is for a short period of time. The tides only happen twice a day so electricity can be produced only for that time, approximately for 12 h and 25 min.

7. This technology is still not cost effective and more technological advancements are required to make it commercially viable

